

Claims

1. In a communication system, a method comprising:
2 forming a first stream of power control commands for controlling transmit
power levels of a plurality of different data streams;
4 controlling a transmit power level of at least a first and second data
stream in said plurality of different data streams in accordance with the first
6 stream of power control commands.

2. The method as recited in claim 1 further comprising:
2 transmitting the first data stream from a first base station to a mobile
station, and transmitting the second data stream from a second base station to
4 the mobile station, after adjusting transmit power level of said first and second
data streams in accordance with the first stream of power control commands.

3. The method as recited in claim 1 further comprising:
2 receiving the first and second data streams, at a mobile station, with a
transmit power level of said first and second data streams adjusted in
4 accordance with the first stream of power control commands.

4. The method as recited in claim 1 further comprising:
2 forming a power control signal from the first stream of power control
commands;
4 transmitting the power control signal from a mobile station to at least one
base station;
6 re-forming the first received stream of power control commands from the
received power control signal at the at least one base station.

5. The method of claim 1, wherein the first data stream contains a
2 voice data.

6. The method of claim 1, wherein the second data stream
2 contains a fax data.

7. The method of claim 1, wherein the second data stream contains
2 an internet transmission.

8. The method of claim 1, wherein the first data stream contains
2 voice data, and the second data stream contains information data.

9. The method of claim 1, wherein the first stream of power control
2 commands is based on an error rate associated with either the first or second
data stream.

10. The method of claim 1, wherein the first stream of power control
2 commands is based on a signal-to-noise ratio associated with either the first or
second received data stream.

11. The method of claim 1, wherein each of the power control
2 command in the first stream of power control commands represents a
command to either increase or decrease or remain at the same transmit power
4 of the first or second data streams.

12. In a communication system, a method comprising:
2 determining a first stream of power control commands;
determining a second stream of power control commands;
4 interleaving the first and second streams of power control commands;
transmitting the interleaved streams of power control commands to a first
6 and second base stations for controlling transmit power levels of a plurality of
different data streams.

13. The method as recited in claim 12 further comprising:
2 receiving, at a mobile station, a first data stream from the first base
station and from the second base station, and receiving a second data stream
4 from the second base station at the mobile station, wherein said first and
second data stream are included in said plurality of different data streams.

14. The method as recited in claim 12 further comprising:

2 receiving the interleaved streams of power control commands at the first
and second base stations;

4 de-interleaving the received interleaved streams of power control
commands for forming, at the first and second base stations, respectively, the
6 first and second received streams of power control commands.

15. The method as recited in claim 12 further comprising:

2 controlling transmit power level of data transmitted from the first base
station in accordance with the first stream of power control commands, and
4 controlling transmit power level of data transmitted from the second base
station in accordance with the second stream of power control commands.

16. The method as recited in claim 15 wherein at least a portion of the
2 data stream transmitted from the first base station at a power level in
accordance with the first stream of power control commands and at least a
4 portion of the data stream transmitted from the second base station at a power
level in accordance with the second stream of power control commands are the
6 same data targeted for a mobile station.

17. The method of claim 12, wherein the first stream of power control
2 commands has a first bit rate within an interleaved power control signal and the
second stream of power control commands has a second bit rate within the
4 interleaved power control signal.

18. In a mobile radio telephone communication system, a method
2 comprising:

forming a first stream of power control commands based on a first data
4 communication from each base station in a first active set of base stations and
from each base station in a second active set of base stations;

6 transmitting, at a power level based on said first stream of power control
commands, a first data stream from the first and second active sets of base
8 stations to a mobile station;

forming a second stream of power control commands based on the first
10 data communication from each uncommon base station in the first and second
sets of active base stations;

12 transmitting to the mobile station, at a power level based on said second
stream of power control commands, the first data stream from each uncommon
14 base station in the first and second sets of active base stations.

19. The method as recited in claim 18 further comprising:

2 transmitting to the mobile station, at a power level based on said second
stream of power control commands, a second data stream from at least one of
4 the uncommon base stations.

20. The method as recited in claim 18 further comprising:

2 transmitting to the mobile station, at a power level based on said first
stream of power control commands, a second data stream from at least one of
4 the first and second active sets of base stations.

21. In a communication system, an apparatus comprising:

2 a power control command generator for forming a first stream of power
control commands for controlling transmit power levels of a plurality of different
4 data streams;

a controller for controlling a transmit power level of a first and second
6 data stream in said plurality of different data streams in accordance with the
first stream of power control commands.

22. The apparatus as recited in claim 21 further comprising:

2 a transmitter configured for transmitting the first data stream from at least
one base station to a mobile station, and transmitting the second data stream
4 from the at least one base station to the mobile station after adjusting transmit
power level of said first and second data streams in accordance with the first
6 stream of power control commands.

23. The apparatus as recited in claim 21 further comprising:

2 a receiver configured for receiving the first and second data streams, at
a mobile station, with a transmit power level of said first and second data
4 streams adjusted in accordance with the first stream of power control
commands.